



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,661	08/04/2003	Wolfgang Glahn	4546	6354
21553	7590	11/01/2005	EXAMINER	
FASSE PATENT ATTORNEYS, P.A. P.O. BOX 726 HAMPDEN, ME 04444-0726			RUTLAND WALLIS, MICHAEL	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,661

Applicant(s)

GLAHN ET AL.

Examiner

Michael Rutland-Wallis

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-17, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 12, 18, 19 and 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-17, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/10/2003 + 9/16/05 + 9/22/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention: a power distribution system and method wherein a control unit utilizes a time staggered operation for distributing power to the loads and a power distribution system and method wherein a control unit utilizes a step-wise operation for distributing power to the loads.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-9 and 13-17 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Walter Fasse on Monday, October 17, 2005 a provisional election was made without traverse to prosecute the invention of a power distribution system and method wherein a control unit utilizes a step-wise operation for distributing power to the loads, claims 1-11 13-17 and 20-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12, 18, 19, 22-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figures 5A and 5B contain hand written descriptions and item numbers. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office

Art Unit: 2835

action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Color photographs and color drawings are not accepted unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 14 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 14 the limitation of an "information transducer arrangement" only appears in the

specification on page 4 in a discussion of prior art. As it cannot be determined by the office where or what this transducer is it is in applicants arrangement it is therefore not enable by the specification.

Claim Objections

Claim 3 recites the limitation "control devices respectively arranged in said power consuming devices", it is not clear what is meant by the control devices arranged in a power consuming device. As the figures teach the control devices and consuming devices are separate elements. If this is not the case please point the examiner to figure or location in the specification where the control device is arranged in the consuming device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 13-17, and 20-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Marin-Martinod (U.S. Pat. No. 6,921,987).

With respect to claims 1 and 2 Marin-Martinod teaches power distribution system arrangement in a passenger transport aircraft (Fig. 1), comprising: an electrical power

Art Unit: 2835

source (not pictured though Marin-Martinod's power distribution system element 22 is supplied by an electrical power source); electrical power consuming devices (Fig. 1 item 26) installed in the aircraft; a power distribution network (Fig. 1 item 22) connecting said electrical power source to said power consuming devices; a control unit (Fig. 1 item 20); a databus (Fig. 1 item 18 information transfer network) connected to said control unit and to each one of said power consuming devices; and a database (Fig. 2 item 54 storage means) that is connected to said control unit and that stores a catalog of power management measures (column 4 lines 32-40 Marin-Martinod measures values of nominal power being consumed by the load); wherein said control unit is adapted to compare an actual power consumption of a single one or a group or all of said power consuming devices to a prescribed maximum power consumption value (column 5 lines 1-25 see term P_{max}), and if said actual power consumption reaches or exceeds said maximum power consumption value, to call up (column 5 line 40 – column 6 line 55 additionally see the table located in column 6 Marin-Martinod teaches power is measured when the condition of consumed power becomes greater than stored P_{max} a consumption limitation phase is implemented) one or more of said power management measures of said catalog stored in said database and to transmit at least one control command corresponding to and dependent on said one or more power management measures to one or more of said power consuming devices that are identified individually by an address code (Marin-Martinod uses in Fig. 2 the control unit to communicate with memory and loads while Marin-Martinod is silent on the use of address codes, all microprocessors use address codes to associate memory locations

Art Unit: 2835

and select different output ports) via said databus. Marin-Martinod does not teach this power distribution system is used in the galley of the aircraft, but does teach its use for powering a various loads in the aircraft for use by the passengers to increase their comfort. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the power distribution system of Marin-Martinod in an aircraft galley to power loads similar to ovens, water boilers, coffee maker machines, and trash compactors.

With respect to claim 3 Marin-Martinod teaches the power control devices (Fig. 1 item 16a-16c) are connected between said power distribution network and said power consuming devices, and connected to said databus to receive said at least one control command and to control a delivery of electrical power (column 5 line 65 – column 6 line 25 Marin-Martinod teaches certain loads may be stopped) from said electrical power source to said one or more of said power consuming devices in response to and dependent on said at least one control command.

With respect to claim 4 Marin-Martinod teaches power consumption comprises an actual current consumption (column 7 lines 35-64), and said prescribed maximum power consumption value comprises a prescribed maximum current consumption value.

With respect to claim 5 Marin-Martinod teaches at least one current measuring unit (item 154) arranged and adapted to measure said actual current consumption.

With respect to claim 6 Marin-Martinod teaches a data line connecting said current measuring unit with said control unit (Fig. 4 not numbered see line extending to the right from element 154).

With respect to claim 7 Marin-Martinod teaches current measuring unit (item 154) is interposed in a power supply branch circuit of said power distribution network to measure said actual current consumption as an actual total current consumption. Marin-Martinod only teaches one load attached to each current measuring units. It would have been obvious to one of ordinary skill in the art at the time of the invention to measure a plurality of consuming devices in order to reduce system complexity and to reduce costs.

With respect to claim 8 Marin-Martinod teaches current measuring unit comprises plural current measuring (Fig. 4 items 154, 156, 158, 160 and 162) units respectively connected individually to individual ones of said power consuming devices to measure said actual current consumption as plural individual current consumptions of said individual ones of said power consuming devices, and wherein said plural individual current consumptions are summed together (Fig. 5 item 108 is used to sum the current) in said control unit.

With respect to claim 9 Marin-Martinod teaches said power management measures include preventive measures (see table in column 6 Marin-Martinod teaches inhibiting power to the load), and said control unit is further adapted to call up said preventive measures and to transmit at least one preventive control command corresponding to and dependent on said preventive measures to one or more of said power consuming devices if said actual power consumption is in a defined range below said maximum power consumption value (Marin-Martinod defines ranges in the table in column 6).

With respect to claim 13 Marin-Martinod teaches control command causes a reduction of power supplied to said one or more of said power consuming devices, and when said actual power consumption falls below said maximum power consumption then said control unit discontinues transmitting said at least one control command (column 7 lines 1-32 Marin-Martinod teaches a entering a power degraded mode when power is at an insufficient level).

With respect to claim 14 Marin-Martinod teaches status information regarding an operating status (column 5 lines 47-52 monitoring the power for an instant and storing the information in memory) of the respective said power consuming device to said control unit, which stores said status information in a status report for the respective said power consuming device in said database.

With respect to method claim 15, the method steps recited in the claim are inherently necessitated by the device structure as taught by the reference Marin-Martinod.

With respect to claim 16 Marin-Martinod does not teach the power consuming devices are food preparation devices in an on-board galley in a passenger transport aircraft, but does teach its use for powering a various loads in the aircraft for use by the passengers to increase their comfort. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the power distribution system of Marin-Martinod in an aircraft galley to power loads for food preparation.

With respect to claim 17 Marin-Martinod teaches catalog further includes preventive measures, and further comprising a step of calling up at least one of said

Art Unit: 2835

preventive measures (see table in column 6 Marin-Martinod teaches inhibiting power to the load) from said catalog, and issuing and transmitting to a power consuming device at least one preventive command dependent on said at least one preventive measure, if said comparing in said step d) determines that said actual current consumption value is in a specified range (Marin-Martinod defines ranges in the table in column 6) below said maximum current consumption value, and then reducing a power consumption of said power consuming devices in response to and dependent on said at least one preventive command.

With respect to claim 20 Marin-Martinod teaches power consuming devices include a first device that has a first operating phase (Fig. 5 item 110A nominal mode) a higher power requirement and a second operating phase (Fig. 5 item 110B degraded mode) with a lower power requirement, and wherein said step g) comprises supplying a higher level of power to said first device during (Marin-Martinod teaches column 7 lines 5-15 high power 200 watts and low power 90 watts) said first operating phase and supplying a lower reduced level of power (Marin-Martinod teaches in degraded mode power is reduced to actuators column 7 lines 17-23) to said first device during at least one reduced power phase of said second operating phase, and supplying power to a second device among said power consuming devices only during at least one said reduced power phase of said second operating phase of said first device and not during said first operating phase of said first device.

With respect to claim 21 Marin-Martinod does not teach this power distribution system is used in the galley of the aircraft, but does teach its use for powering a various

loads in the aircraft for use by the passengers to increase their comfort. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the power distribution system of Marin-Martinod in an aircraft galley to power loads similar to ovens, water boilers, coffee maker machines, and trash compactors.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marin-Martinod (U.S. Pat. No. 6,921,987) in view of Karuppana (U.S. Pat. No. 6,744,149).

As best understood by the examiner a step-wise reduction of power means to continually lower the power in an incremental process. If applicant intends another meaning for step-wise reduction of power it should be clearly stated in reply to this office action.

With respect to claim 10 Marin-Martinod teaches said power management measures include an overall power reduction procedure (Fig. 5 item 110B alternatively column 7 line 14). While Marin-Martinod does reduce the power to actuators and limit operations of excess devices (column 7 lines 17-23), Marin-Martinod does not use a step-wise reduction to reduce the power distributed to the loads with. Karuppana teaches the use a step-wise reduction method of power to prevent failure and improve operation (column 2 lines 1-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Marin-Martinod to use to step down the current and/or power to the loads as taught by Karuppana in order to continue operation of all devices at peak loads.

Art Unit: 2835

With respect to claim 11 Marin-Martinod teaches a power management measures include a prioritized power reduction procedure (column 5 line 65 – column 6 line 6), said database further stores priority values (Marin-Martinod teach storing and defining a set of priority rules column 5 line 65 – column 6 line 6) respectively allocated to said power consuming devices. While Marin-Martinod does reduce the power to actuators and limit operations of excess devices (column 7 lines 17-23), Marin-Martinod does not use a step-wise reduction to reduce the power distributed to the loads with. Karuppana teaches the use a step-wise reduction method of power to prevent failure and improve operation (column 2 lines 1-26). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Marin-Martinod to use to step down the current and/or power to the loads as taught by Karuppana in order to continue operation of all devices at peak loads.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chiang et al. (U.S. Pat. No. 5,796,628) teaches a system for preventing collapse in electrical power distribution by prioritizing and reducing power to loads, Karuppana et al. (U.S. Pat. No. 6,465,908) teaches an intelligent power distribution system and methods of reducing power drawn from the supply and peak times

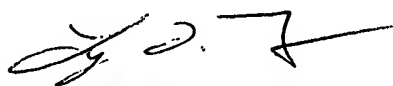
The Examiner would like also like to thank attorney Walter Fasse for a timely response to the election of species

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MRW


LYNN FEILD
SUPERVISORY PATENT EXAMINER